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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,380	06/18/2001	Taizo Yamawaki	843.39887X00	2533

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EXAMINER

UBILES, MARIE C

ART UNIT PAPER NUMBER

2642

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/787,380	Applicant(s) YAMAWAKI ET AL.	
	Examiner Marie C. Ubiles	Art Unit 2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/18/01.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 15-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 15-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/12/04 and 5/7/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

1. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of copending Application No. 10/037,241. Although the conflicting claims are not identical, they are not patentably distinct from each other because in claim 1 merely recites broader limitations than those recited in claim 24 of Application No. 10/037,241.

The claimed invention in the instant application is fully disclosed in patent application 10/037,241 and it is broader than the claimed invention in claim 24 of the 10/037,241 application. No new invention, or new improvement is being claimed in the instant application. Applicant is now attempting to claim broadly that which had been previously described in more detail in the claims of the 10/037,241 application (In re Van Ornum, 214 USPQ 761 CCPA 1982).

2. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Terminal Disclaimer*

3. Enclosed with this Office action is a sample terminal disclaimer which is effective to overcome a provisional obviousness-type double patenting rejection over a pending application (37 CFR 1.321(b) and (c)).

Also enclosed is a sample Statement Under 37 CFR 3.73(b) (Form PTO/SB/96) which an assignee may use in order to ensure compliance with the rule. Part A of the Statement is used when there is a single assignment from the inventor(s). Part B of the Statement is used when there is a chain of title. The "Copies of assignments..." box should be checked when the assignment document(s) (set forth in part A or part B)

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is/are not recorded in the Office, and a copy of the assignment document(s) is/are attached. When the "Copies of assignments..." box is checked, either the part A box or the part B box, as appropriate, must be checked, and the "Reel\_\_\_\_, Frame\_\_\_\_" entries should be left blank. If the part B box is checked, and copies of assignments are not included, the "From:\_\_\_\_ To:\_\_\_\_" blank(s) must be filled in. This statement should be used the first time an assignee seeks to take action in an application under 37 CFR 3.73(b), e.g., when signing a terminal disclaimer or a power of attorney.

### ***Claim Objections***

4. Claim 25 is objected to because of the following informalities: the claim cannot depend from claims 1-19, as claims 10-14 were cancelled in a Preliminary Amendment dated March 19, 2001. Appropriate correction is required.

### ***Allowable Subject Matter***

5. Claims 2-9 and 15-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

No prior art was found teaching individually, or suggesting in combination, the features of the applicant's invention, specifically *"...a plurality of couplers connected one by one to an output terminal of the plurality of VCOs, a frequency converter connected to each output terminal of the plurality of couplers, and converting a frequency of addition signal of the output signal from the plurality of couplers so as to output the second input signal..."*.

**Damgaard et al.** (US 6,766,178) discloses a plurality of oscillators 111-115 connected to two combiners or switches 110-112, and wherein the output of one combiner or switch (112) is sent to mixer 116.

However, Damagaard's et al. system lacks the limitation specifying that a frequency converter is connected to each output terminal of the plurality of couplers (or switch/combiner).

**Horie et al.** (US 5,568,098), **Lee** (US 5,825,254), **Hodel et al.** (US 5,359,297), **O'Sullivan et al.** (US 6,259,755), **Miwa** (US 4,745,372), **Irwin et al.** (US 4,952,889), **Yamawaki et al.** (US 6,163,585) and **Borras et al.** (US 5,175,729) all disclose a phase detector connected to a filter whose output terminal is connected to an oscillator; an output signal of the oscillator is fed back to the phase comparator.

However, Horie et al., Lee, Hodel et al., O'Sullivan et al., Miwa, Irwin et al., Yamawaki et al. and Borras et al. systems, all lack the limitation specifying a plurality of couplers connected one by one to an output terminal of the plurality of VCOs, a frequency converter connected to each output terminal of the plurality of couplers, and converting a frequency of addition signal of the output signal from the plurality of couplers so as to output the second input signal.

7. Claim 25 discloses an apparatus that utilizes the PLL circuit as recited in allowed –over prior art- claim 1.

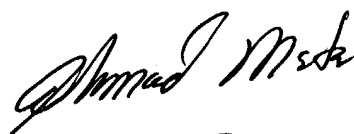
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie C. Ubiles whose telephone number is (703) 305-0684. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marie C. Ubiles  
October 27, 2004.

  
AHMAD MATAR  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600